in the hand and examined with the lens. The special advantage of the tube is that of ease of manipulation; one can readily secure any view desired and that without injury to the egg. An additional advantage is that the method allows little trouble from the inevitable mixing of stages that occurs when the material is handled in bulk by students.

For stages with embryonic shield and germ ring the preceding method should be used if the yolk is opaque; but a better plan is to secure the small transparent eggs of the runner *(Ctenolabrus)* and mount them in formalin on a hollow-ground slide, sealing the edges of the cover slip with cement. Staining is not required. In this egg one is able to view either upper or under surface simply by changing the focus.

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PRESERVATION OF BRYOZOA

A method for the preservation of Bryozoa in a well extended condition was worked out at the University of Michigan Biological Station during the summer of 1911.

Care and patience are necessary in the narcotization and killing of Bryozoa.

The following method was used successfully for preserving Cristatella, Plumatella and Fredericella.

Chloretone was used for narcotization, and 3% formalin for killing and subsequent preservation.

The colony was placed in a tube or beaker of convenient size, and covered completely with water. When the lophophores of the individual polypides were well extended, the chloretone solutions were added in the order given below:

1. A few drops of sat. sol. of chloretone in water.
2. 1 part sat. sol. of chloretone to 4 parts of water.
3. 2 parts sat. sol. of chloretone to 3 parts of water.
4. 3 parts sat. sol. of chloretone to 2 parts of water.
5. 4 parts of sat. sol. of chloretone to 1 part of water.
6. Saturated solution of chloretone.

The amount of each solution was equal to the amount of water containing the colony. Each solution was added drop by drop very slowly. Gradually some of the solution containing the colony was removed in order to keep the amount constant.

The time required for the application of each solution of chloretone varied from 15 to 30 minutes. After the colony had been in the saturated chloretone solution for 15 minutes, the killing agent was added.

A 3% solution of formalin was diluted with a saturated solution of chloretone, and the following grades were used:

1. 1 part 3% sol. of formalin to 2 parts sat. sol. of chloretone.
2. 1 part 3% sol. of formalin to 1 part sat. sol. of chloretone.
3. 2 parts 3% sol. of formalin to 1 part sat. sol. of chloretone.
4. 3% formalin.

These solutions were added drop by drop in the same manner as for narcotization, and 15 to 30 minutes were allowed for the application of each grade.

Two and one half to five hours are necessary for the entire procedure. For cristatella the minimum time is sufficient, but for Plumatella and especially for Fredericella the maximum time is necessary.

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CELLULOID COVERS FOR LARGE MICROSCOPIC SLIDES

This method is devised to meet the need of covering serial sections of large objects, such as advanced embryos. One can reach, for examination with a compound microscope, every point on slides measuring 7x3 inches. These may be cut from double thickness window glass.

Such material as will not permit of being stained in bulk before embedding can be stained on the slide in a photographic tray of hard rubber (not painted). Glass covers are not practicable on such slides; but thin window glass may be used where high powers are not to be employed. We have recently found that high powers, including oil immersion lenses, may be used on these large slides by covering with what is known among the dealers in photographic sup-